September 12, 2003

Mr. Paul Gunter, Director
Reactor Watchdog Project
Nuclear Information and Resource Service
1424 16th Street NW, Suite 404
Washington, DC 20036

SUBJECT: RESPONSE TO YOUR LETTER DATED JUNE 13, 2003, REGARDING COMMENTS ON NRC ADDITIONAL DRAFT GUIDANCE FOR REVIEW STANDARDS OF EARLY SITE PERMIT APPLICATIONS

Dear Mr. Gunter:

This letter responds to your letter of June 13, 2003, to the Director, New Reactor Licensing Project Office of the U.S. Nuclear Regulatory Commission (NRC), providing comments on two sections of draft Review Standard (RS)-002, "Processing Applications for Early Site Permits." Many of the security-related issues raised in your letter are beyond the scope of the agency's review of an early site permit (ESP) application. In accordance with 10 CFR 100.21(f), an ESP applicant is required to demonstrate that site characteristics are such that adequate security plans and measures can be developed. (See letters from the NRC to prospective ESP applicants dated May 6, 2003: ADAMS accession numbers ML030980003, ML030980029, and ML030980083.) Similarly, many of your comments regarding emergency planning are beyond the scope and level of detail of the guidance provided in RS-002. For these reasons and for others stated below, we do not believe changes to RS-002 are warranted as a result of your comments. Nevertheless, we are providing copies of your letter to NRC staff organizations with cognizance of the issues raised in your letter for their information and appropriate consideration.

Each of your comments is reproduced verbatim below, followed by the staff's response.

Comment 1. The draft guidance for the ESP does not adequately address the clear and present danger from deliberate acts of terrorism/sabotage as it directly impacts the resultant radiological consequence and associated increase in risk to the public health and safety.

The guidance in Section 15.0 of draft RS-002 states that an ESP applicant should evaluate a spectrum of design basis accidents (DBAs), including the bounding DBA, to determine the radiological consequences. The guidance is not intended to be prescriptive regarding development of the DBAs or regarding a specific initiator (such as an act of terrorism or sabotage). The NRC has initiated new studies of the vulnerability of nuclear power plants to acts of terrorism, including assessments for land-based, water-borne, and aircraft threats. Although the studies will not be complete until later this year, it is already clear that the planning basis for offsite emergencies remains valid in terms of timing and magnitude for the range of potential radiological consequences of a terrorist attack on reactors or spent fuel pools.

Supporting information for your comment correctly states that existing certified designs have not been evaluated against a terrorist attack of the nature of those that occurred on September 11, 2001. Regardless of whether a combined license (COL) applicant chooses to reference an existing certified design, the NRC will require that the applicant for a COL address any physical security requirements that are applicable and in effect.

The supporting information for your comment also expresses concern regarding the use of the plant parameter envelope (PPE) concept at the ESP stage. Your comment correctly notes that site adequacy cannot be determined without some consideration of the characteristics of the reactor or reactors to be located there. Use of a PPE is one way to address these characteristics. It is incumbent on the ESP applicant to establish that a PPE submitted with an ESP application includes design parameters needed to demonstrate the ability of a site to safely host a nuclear power plant or plants within the parameters specified in the PPE. The staff's positions on the use of a PPE, which are documented in a letter dated February 5, 2003 (ADAMS accession number ML030230071) to the Nuclear Energy Institute and which will be further documented in RS-002, address this point. Among other positions, the staff states in this letter: "Given that PPE values do not reflect a specific design and will not be reviewed by the NRC staff for correctness, the granting of an ESP by the NRC does not indicate NRC approval of the site for any specific plant or type of plant. In addition to the emergency preparedness and environmental impact findings, site approval will be contingent on the staff's ability to make a finding, taking into consideration the site criteria contained in 10 CFR Part 100, that a reactor or reactors having characteristics that fall within the parameters for the site can be constructed and operated without undue risk to the health and safety of the public. This finding may result in conditions or limitations on the ESP in specific areas, as set forth in 10 CFR Section 52.24."

An ESP does not allow the ESP holder to build a nuclear power plant, and a COL applicant referencing an ESP that was based on a PPE must demonstrate that the actual plant design is bounded by the PPE. Therefore, the risk associated with use of a PPE at the ESP stage is a licensing risk for a future COL applicant who might reference such an ESP. Specifically, the COL applicant may not be able to build a particular nuclear plant on the site without reopening one or more site adequacy issues at the COL stage. Contrary to your comment, the NRC believes that an ESP applicant's use of a PPE, subject to limitations imposed by the NRC as described above, does not result in an increase in risk to the health and safety of the public.

Finally, supporting information for your comment discusses concerns with the staff's consideration of NRC studies regarding radiological consequence evaluations. The concerns raised in your comment, including those addressing containment design, spent fuel storage, and aircraft threats, are beyond the scope and level of detail of RS-002. Section 15.0 of RS-002 provides general guidance for calculating radiological consequences of design basis accidents without identifying or prescribing specific accidents, which are dependent on the site and reactor characteristics or parameters. Also, the subject of dry cask spent fuel storage is outside the 10 CFR Part 52 licensing framework and is therefore inapplicable to ESPs. Any applicant for a dry cask storage facility would be subject to the requirements of 10 CFR Part 72, "Licensing Requirements for the Independent Storage of Spent Nuclear Fuel, High-Level Radioactive Waste, and Reactor-Related Greater than Class C Waste."

The NRC staff is continuing to address physical security issues such as those raised in your comment (including aircraft threats), and a copy of your letter will be provided to the cognizant staff for their information.

*Comment 2. The draft guidance for the radiological consequence standard for the ESP does not adequately address known adverse to public safety and health factors and conditions affecting the reasonable assurance of the successful execution of Emergency Planning and Response in the event of a nuclear accident or deliberate act of terrorism/sabotage on the reactor, the irradiated fuel storage ponds and the on-site irradiated fuel dry cask storage installations***.**

The regulations in 10 CFR 52.17(b) require an ESP applicant to identify major physical characteristics unique to the proposed site that could pose a significant impediment to development of emergency plans. In addition, an ESP applicant may either propose major features of emergency plans or complete and integrated emergency plans. Emergency preparedness guidance in Section 13.3 of the draft RS-002 is consistent with these requirements. This section of RS-002 (which was advertised for public comment in December 2002) was developed using standards and guidance that are already in existence and have been subjected to public comment. Emergency preparedness programs developed in compliance with these standards are designed to cope with a spectrum of events, including those involving rapid, large releases of radioactivity. Emergency preparedness exercises have included simulated large releases of radioactivity. Necessary protective actions and offsite response are not predicated on the cause of events. Whether releases from the plant occur as a result of terrorist acts, equipment malfunctions, or other causes, emergency plans guide decisionmakers and responders in the same way. Also, discussion of specific events is beyond the scope and level of detail of RS-002 and not required by 10 CFR Part 52. We therefore do not believe a change is needed to RS-002 as a result of this comment.

For additional Commission perspective on emergency planning and other areas of interest potentially related to terrorism, you may wish to read the Commission's recent correspondence to the Honorable Tom Ridge, Secretary, Department of Homeland Security, a copy of which is posted on the NRC's web site at http://www.nrc.gov/reading-rm/doc-collections/congress-docs/correspondence/2003/082903-ridge-letter.pdf**.**

Comment 3. The draft guidance for the ESP radiological consequence evaluation does not acknowledge nor factor in previous designs certified by the NRC that were not sufficiently detailed, analyzed and completed so as to contain inaccurate and false assumptions regarding Design Basis Accidents and the integrity vital reactor systems, structures and components. In these cases the agency failed to thoroughly analyze, identify, capture and resolve significant safety issues which linger on at reactor sites today. There is, therefore, ample reason for the public to lack reasonable assurance and confidence in the agency's safety and radiological consequence analyses for Plant Parameter Envelopes that are being offered as surrogates in the absence of scrutable designs proposed for the site.

The NRC staff's position is that an ESP application that references a PPE can establish reasonable assurance of the adequacy of a proposed site for the applicant's intended use. As we noted above in response to your first comment, an ESP does not allow the ESP holder to

build a nuclear power plant. Therefore, the risk associated with use of a PPE at the ESP stage is a licensing risk for a future COL applicant who might desire to reference the ESP, not a safety risk for the public. Should the COL applicant be unable to propose a reactor design that fits within the PPE, the applicant will need to evaluate the effect of any differences, a process that could potentially lead to reopening one or more site adequacy issues resolved at the ESP stage.

We note the examples of design issues presented in your comment. The NRC's regulatory process is intended to identify such issues before they become significant, and to require design margin and defense-in-depth such that emergent technical issues do not pose an unacceptable risk to health and safety of the public. The NRC recognizes the need to continually improve its processes, including those related to resolution of technical issues. The agency's ongoing strategic planning efforts identify initiatives to bring about improvements.

If you have any questions regarding this letter, please contact Michael Scott at (301) 415-1421.

Sincerely,

/RA/

James E. Lyons, Program Director
New, Research and Test Reactors Program
Division of Regulatory Improvement Programs
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cc: See next page

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ACCESSION NO. ML031950532 *See previous concurrence

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ESP-Generic

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